Fujitsu recommends Windows 8 Pro.

Data Sheet
Fujitsu ESPRIMO P520 E85+ Desktop PC

Your Flexible and Economic PC

Fujitsu ESPRIMO P520 PCs deliver high-quality computing for your demanding office applications. Designed for the specific needs of project-based customers they cover attractive price points and focus on providing the continuity needed for daily operations. They can be either individually configured or customized to meet your specific hardware needs.

High performance and best price/performance ratio
Powerful and cost-effective project PC
- 4th generation Intel® Core™ processor family

System management
The perfect answer to offload your IT administrators
- DeskView Admin enhances the management of the devices in your IT infrastructure during productive operation - even remotely and after hours

Made in Germany
Outstanding quality and stable functions based on German production standards
- The development, production and function tests - all under one roof in Germany

Lifecycle
Hardware continuity for long-lasting project requirements
- Managed lifecycle up to 12 months

Meets ENERGY STAR® requirements
Low power consumption and low costs, without any loss in performance
- 85% energy efficient power supply

Fujitsu recommends Windows 8 Pro.

Components

Processor	Intel® Core™ i7-4770 processor (4 Cores / 8 Threads, 3.40 GHz, up to 3.9 GHz, 8 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4670 processor (4 Cores / 4 Threads, 3.40 GHz, up to 3.8 GHz, 6 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4570 processor (4 Cores / 4 Threads, 3.20 GHz, up to 3.6 GHz, 6 MB, Intel® HD Graphics 4600) *
	Intel® Core™ i5-4440 processor (4 Cores / 4 Threads, 3.10 GHz, up to 3.3 GHz, 6 MB, Intel® HD Graphics 4600)
	Intel® Core™ i3-4130 processor (2 Cores / 4 Threads, 3.40 GHz, 3 MB, Intel® HD Graphics 4400)
	Intel® Pentium® processor G3420 (2 Cores / 2 Threads, 3.20 GHz, 3 MB, Intel® HD Graphics)
	Intel® Pentium® processor G3220 (2 Cores / 2 Threads, 3.00 GHz, 3 MB, Intel® HD Graphics)
	*with Intel® Turbo Boost Technology (clock speed and performance will vary depending on workload and other variables)
Operating systems	
Operating system	Windows 8 Pro Windows 8 Windows® 7 Professional 64-bit Windows® 7 Professional 32-bit
Operating system compatible	openSUSE Linux
Memory modules	2 GB (1 module(s) 2 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM
	4 GB (1 module(s) 4 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM
	8 GB (1 module(s) 8 GB) DDR3, unbuffered, non-ECC, 1600 MHz, PC3-12800, DIMM
Hard disk drives (internal)	SSHD SATA III, 7200 rpm, 1000 GB, 3.5-inch
	SSHD SATA III, 5400 rpm, 500 GB, 2.5-inch
	SSD SATA III Premium, 256 GB, 2.5-inch
	SSD SATA III Premium, 128 GB, 2.5-inch
	SSD SATA III, 256 GB, 2.5-inch
	SSD SATA III, 128 GB, 2.5-inch, SED
	SSD SATA III, 128 GB, 2.5-inch
	HDD SATA III, 7200 rpm, 2000 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 1000 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 500 GB, 3.5-inch
	HDD SATA III, 7200 rpm, 250 GB, 3.5-inch
	HDD SATA II, 5400 rpm, 320 GB, 2.5-inch
Hard disk notes	Up to 20 GB of HDD space is reserved for system recovery SED (Self-Encrypting Drive) SSD (Solid State Disk) SSHD (Solid State Hard Disk, Hybrid drive)
Graphics	NVIDIA® NVS 300, 512 MB
	NVIDIA® GeForce® GT630 DisplayPort 2GB FH, 2 GB
	NVIDIA® GeForce® 605 DisplayPort 1GB FH, 1 GB
	LFH59/ 2x DVI-I adapter cable
	LFH59/ 2x DP adapter cable
	DVI Adapter
	DP to DVI-D (single link) Adapter Cable
	DP Extension Card
	ATI Radeon® HD7350 1GB FH, 1 GB
Drives (optional)	BD Triple Writer SATA slim (tray)
	DVD-ROM
	DVD Super Multi
	MultiCard Reader 24in1 USB 2.0 3.5"

Interface add on cards/components (optional)	
	WLAN III, 802.11g/Draft-n (Windows only, dedicated regions only)
	USB 3.0 front connector
	Parallel Interface
	Gigabit Ethernet PCIe x1, DS
	eSATA Interface
	Dual serial card PCIe x1
Base unit	ESPRIMO P520 E85+
Mainboard	
Mainboard type	D3220
Formfactor	µATX
Chipset	Intel® B85
Processor socket	LGA 1150
Processor quantity maximum	1
Memory slots	4 DIMM (DDR3)
Supported capacity RAM (max.)	32 GB
Memory frequency	1600 MHz
Memory notes	Dual channel support. For dual channel performance, a minimum of 2 memory modules have to be ordered. Capacity per channel has to be the same
LAN	10/100/1000 MBit/s Intel® I217LV
BIOS version	AMI Aptio 4.6
BIOS features	BIOS Flash EPROM update by software Recovery BIOS Unified Extensible Firmware Interface (UEFI)
Audio codec	Realtek ALC671
Audio features	Internal speaker supports audio playback (optional), High Definition Audio, 5.1 surround sound
I/O controller on board	
Serial ATA total	4
thereof SATA III	4
thereof eSATA	1 (optional)
Controller functions	Serial ATA II (3 Gbit) Serial ATA III (6 Gbit) NCQ AHCI
Interfaces	
Audio: line-in	1
Audio: line-in / microphone	1
Audio: line-out	1
Front audio: microphone	1
Front audio: headphone	1
USB 2.0 total	8
USB 3.0 total	4
USB front	2x 2.0
USB rear	4x 2.0/ 2x 3.0
USB internal	2x 2.0/ 2x 3.0
VGA	1
DisplayPort	1 (optional)
DVI	1 (DVI-D)
Serial (RS-232)	1 (9pin, 16 byte FIFO, 16550 compatible)
Mouse / Keyboard (PS/2)	2
Ethernet (RJ-45)	1

Interfaces	
Parallel	1 (optional) (25pin with EPP and ECP)
eSATA	1 (optional)
Interface Module notes	Anytime USB charge functionality
Input device / components	
	Optical USB wheel mouse
Input devices (optional)	Optical USB/PS2 tilt wheel mouse KBPC PX ECO Mouse M440 ECO
Drive bays	
Drive bays total	5
3.5-inch internal bays	2
3.5-inch external bays	1
5.25-inch external bays	2
Drive bay notes	3,5" bay can be used for 2,5" drives
Slots	
PCI-Express 3.0 x16	1 x (210 mm / 8.27 inch) Full height
PCI-Express 2.0 x4 (mech. x16)	1 x (210 mm / 8.27 inch) Full height
PCI-Express x1	2 x (190 mm / 7.48 inch) Full height
Graphics on board	
Graphics brand name	Intel® HD Graphics, HD Graphics 4400, HD Graphics 4600 (depending on processor)
Shared video memory	up to 1782 MB
TFT resolution (VGA)	1024 x 768 pixel 1280 x 1024 pixel 1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1600 x 1200 pixel 1680 x 1050 pixel 1920 x 1080 pixel
TFT resolution (DVI)	1280 x 1024 pixel 1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel
TFT resolution (DisplayPort)	1280 x 1024 pixel 1360 x 768 pixel 1440 x 900 pixel 1600 x 900 pixel 1680 x 1050 pixel 1920 x 1080 pixel 1920 x 1200 pixel 2560 x 1440 pixel 2560 x 1600 pixel 3840 x 2160 pixel (requires Intel® Core™ i3, i5 or i7 processor)
Graphics features	Support for up to three independent displays DirectX® 11.1 HDCP support Open GL® 3.3 Open CL® 1.2 For multi monitoring mode, graphics card and integrated graphics run in parallel (Microsoft® Windows® 7 or Windows 8)

Graphics on board	
Graphics notes	up to 1 GB dedicated video memory (main memory owned and locked for graphics use) Tested resolutions, depending on display type additional resolutions and frequencies possible Shared memory depending on main memory size and operating system Resolution (color depth up to 32 Bit/pixel) For TFT we recommend using 60Hz
Electrical values	
Power efficiency note	power supply efficiency (at 230V; 20% / 50% / 100% load) : 83% / 86% / 85%
	0-Watt mode with hard-off switch
Rated voltage range	100 V - 240 V
Rated frequency range	50 Hz - 60 Hz
Operating voltage range	90 V - 264 V
Operating line frequency range	47 Hz - 63 Hz
Max. output of single power supply	280 W
Power factor correction/active power	active
Monitor outlet	No
Power consumption	
Power consumption note	See white paper Energy Consumption 0-Watt mode with hard-off switch
Link to Energy White Paper	http://docs.ts.fujitsu.com/dl.aspx?id=152763c7-d890-4a55-8bcb-4e14dbcca188
Heat dissipation	
Heat dissipation notes	See white paper Energy Consumption
Noise emission	
Related Processors for noise	Intel® Core™ i7 4770
Standard noise emission	2x2 GB, HDD, ODD, Windows According to ISO 7779:2010, ECMA-74
Standard noise notes / description	A-weighted sound power level Lwad (in B) / Workplace related A-weighted sound pressure level LpAm (in dB(A)) Bystander position
Standard noise operation mode: CPU 50% load	3.5 B / 22 dB(A) Bystander ; 26 dB(A) Operator position
Standard noise operation mode: HDD load	3.6 B / 22 dB(A) Bystander ; 26 dB(A) Operator position
Standard noise operation mode: Idle mode	3.5 B / 22 dB(A) Bystander ; 25 dB(A) Operator position
Standard noise operation mode: ODD load	4.5 B / 31 dB(A) Bystander ; 36 dB(A) Operator position
Standard noise operation mode: Office applications 2.0	3.5 B / 22 dB(A) Bystander ; 25 dB(A) Operator position
Blue angel noise emission according certification	According to ISO 7779:2010, ECMA-74 for max. possible configuration
Blue angel noise notes / description	A-weighted sound power level Lwad (in B); 1B = 10dB
Blue angel noise operation mode: HDD load	3.7 B = 37 dB (A)
Blue angel noise operation mode: Idle mode	3.6 B = 36 dB (A)
Blue angel noise operation mode: ODD load	4.6 B = 46 dB (A)
Dimensions / Weight / Environmental	
Dimensions (W x D x H)	175 x 425 x 353 mm
	6.89 x 16.74 x 13.9 inch
Operating position	Vertical
Weight	10 kg
Weight (lbs)	22.05 lbs

Dimensions / Weight / Environmental	
Weight notes	Actual weight may vary depending on configuration
Operating ambient temperature	10 - 35 °C (50 - 95 °F)
Compliance	
Product	ESPRIMO P520
Model	MI4W
Germany	TÜV GS Blauer Engel / Blue Angel in progress
Europe	CE
USA/Canada	FCC Class B cCSAus
Global	RoHS (Restriction of hazardous substances) WEEE (Waste electrical and electronic equipment) Microsoft Operating Systems (HCT / HCL entry / WHQL) ENERGY STAR® 5.0 (dedicated regions) EPEAT® Gold (dedicated regions)
Compliance link	http://globalsp.ts.fujitsu.com/sites/certificates
Additional Software	
Additional software (preinstalled)	Workplace Protect (secure authentication solution) Adobe® Reader® (pdf reader) McAfee Multi Access Security (anti-virus and internet security software; 60 days trial version) Win7: Fujitsu Recovery (hard disk based recovery) Win8: Microsoft Push Button Recovery (hard disk based recovery) Microsoft Office (buy license to activate the pre-installed Microsoft Office)
Additional software (optional)	Recovery DVD for Windows® Drivers & Utilities DVD (DUDVD) CyberLink PowerDVD BD (playback software for Blu-ray Disc™) CyberLink PowerDVD DVD (playback software for DVD) Nero Essentials XL
Miscellaneous	
	Thermal management
Compatibility (references)	
	DMI 2.0 PC 2001 WMI 1.5 USB 2.0 SMBIOS
Manageability	
Manageability technology	DeskUpdate Driver management PXE 2.1 Boot code Wake up from S5 (off mode) WoL (Wake on LAN)
Manageability software	DeskView Client DeskView Instant BIOS Management DeskView Integration for Symantec Management Platform
DeskView components	Inventory Management BIOS Management Driver Management Security Management Alarm Management
Manageability link	http://www.fujitsu.com/fts/manageability
Security	
Physical Security	Kensington Lock support Eye for padlock

Security	
System and BIOS Security	Boot sector virus protection Write protect option for the Flash EPROM Control of external interfaces Optional: Trusted platform module (TPM 1.2)
User Security	User and supervisor BIOS password Hard disk password Access protection via external SmartCard reader (optional) Access protection via internal SmartCard reader (optional)

Packaging information	
Packaging dimension (mm)	500 x 290 x 540 mm
Packaging dimension (inch)	19.69 x 11.42 x 21.26 inch
Max. quantity / pallet	24
Material - Weight (g) Carton	1270 g
Material - Weight (lbs) Carton	2.8 lbs
Material - Weight (g) EPS / PS	160 g
Material - Weight (lbs) EPS / PS	0.35 lbs
Material - Weight (g) PE	60 g
Material - Weight (lbs) PE	0.13 lbs
Packaging notes	printed user documentation is bleached in chlorine free process

Warranty	
Standard Warranty	1 year (depending on country)
Service level	Bring-In / Onsite Service (for countries within region FTS CEMEA&I, for all other countries depending on local regulations, minimum: 1 year material warranty)
Warranty Terms & Conditions	http://support.ts.fujitsu.com/warranty

Maintenance and Support Services - the perfect extension	
Recommended Service	9x5, Response Time: Next Business Day
Spare Parts availability	5 years after end of product life
Service Weblink	http://www.fujitsu.com/fts/services/support

Recommended Accessories

Mouse M440 ECO		Fujitsu Mouse M440 ECO is made from 100% bio material and has a completely PVC free cable. The elegant M440 ECO works on nearly every surface and follows all your hand movements smoothly and precisely. It features two main buttons and as well as a scroll wheel providing comfortable computing to both right and left-handed users.	Order Code: S26381-K450-L200
SOUNDSYSTEM DS E2000 Air		The new more powerful SOUNDSYSTEM DS E2000 Air gives you impressive, well-balanced sound throughout the frequency band. It is an unbeatable USB speaker set with a surprisingly small form factor. The robust satellite speakers are decorated with a deluxe piano finish and the base is adorned with warm ambient lighting.	Order Code: S26391-F7128-L600
Keyboard KBPC PX ECO		Fujitsu's KBPC PX ECO keyboard is the perfect contribution to Green IT. The keyboard is made out of 45% renewable raw material and comes with a PVC free USB cable. In addition, the KBPC PX ECO offers first class comfort and ergonomics. It attracts attention with its impressive modern design and useful extras.	S26381-K341-L1** (**: country specific variation)

Wireless Keyboard Set LX900

The Wireless Keyboard LX900 is a top of the line desktop solution for lifestyle orientated customers, who want only the best for their desk. This superb keyboard set with offers ambitious users more functions, security and better features than a conventional interface device. It even includes 2.4 GHz technology and 128 AES encryption for security.

S26381-K564-L4** (**: Country specific variation)

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More information

Fujitsu OPTIMIZATION Services

In addition to Fujitsu ESPRIMO P520 E85+, Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

Fujitsu Portfolio
Build on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offering. This allows customers to leverage from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

Computing Products
www.fujitsu.com/global/services/computing/

Software
www.fujitsu.com/software/

More information

Learn more about Fujitsu ESPRIMO P520 E85+, please contact your Fujitsu sales representative or Fujitsu Business partner, or visit our website.
www.fujitsu.com/fts/ESPRIMO

Fujitsu green policy innovation

Fujitsu Green Policy Innovation is our worldwide project for reducing burdens on the environment.
Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.
Please find further information at http://www.fujitsu.com/global/about/environment

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